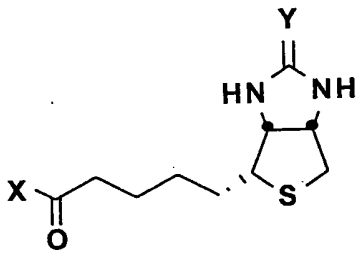
CLAIMS:

1. A versatile linker compound of

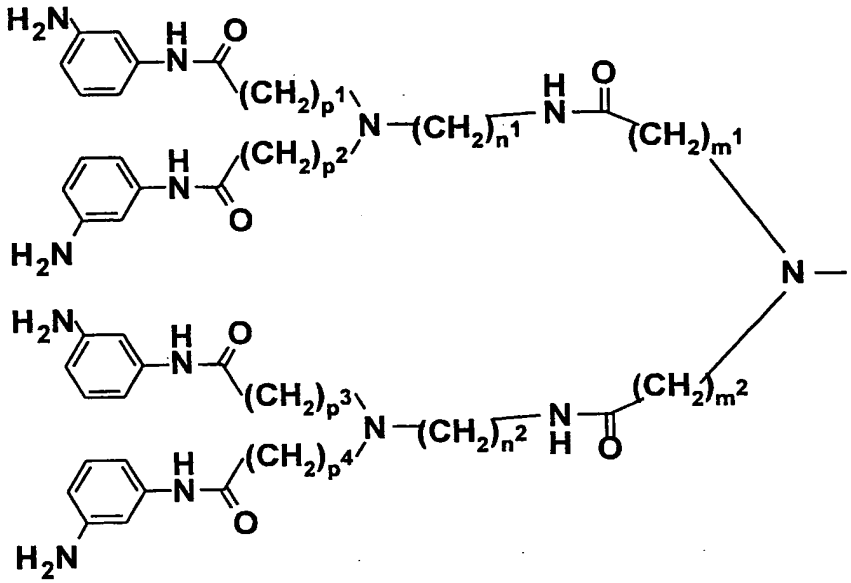
a structure represented by following general formula (1), where Y has a structure represented by O or NH, and

X has a structure serving as a multi-branched structure moiety including four hydrocarbon derivative chains, wherein the hydrocarbon derivative chains each include an aromatic amino group at an end thereof, and may or may not include a carbon-nitrogen bond in a backbone thereof.



....(1)

2. The versatile linker compound according to Claim 1, where X has a structure represented by following general formula (2), wherein m^1, m^2, n^1, n^2, p^1, p^2, p^3, and p^4 are independently an integer of 1 to 6.



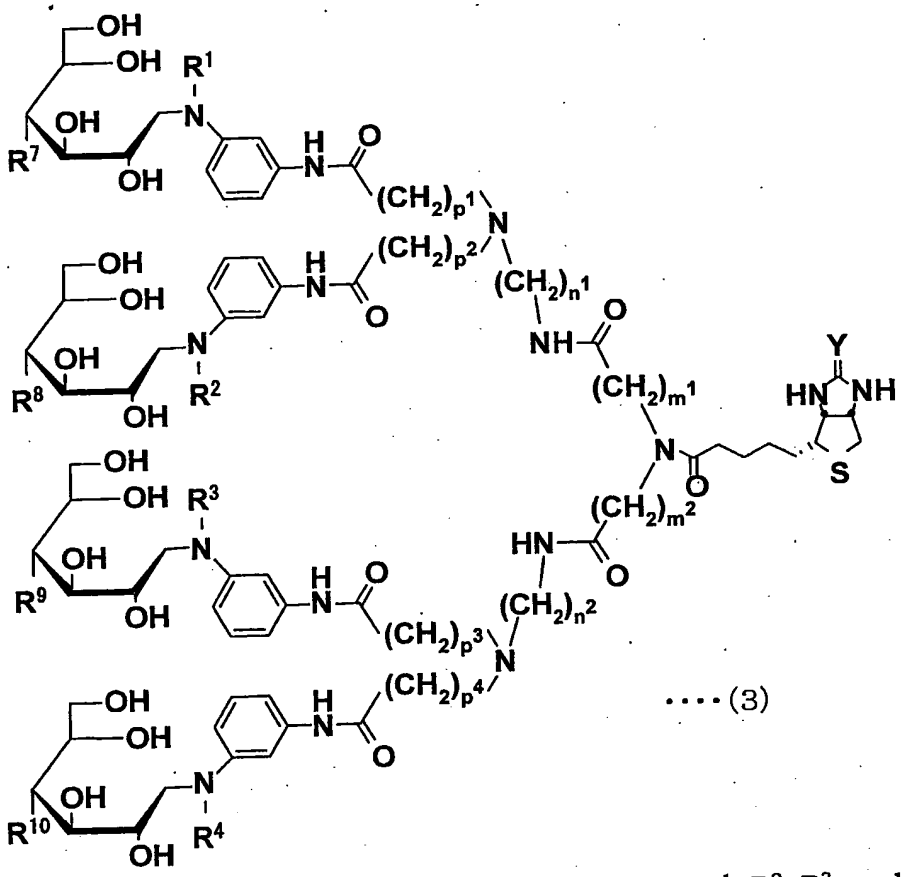
.... (2)

3. The versatile linker compound according to Claim 2, where m^1, m^2, n^1, n^2, p^1, p^2, p^3, and p^4 are all represented by 2 in the general formula (2).

4. A ligand which comprises the aromatic amino group of the linker compound according to any one of Claims 1 to 3 and a sugar molecule introduced into the aromatic amino group.

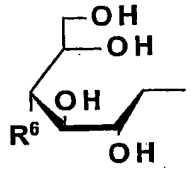
5. The ligand according to Claim 4, wherein said sugar molecule is any one of a monosaccharide, an oligosaccharide, and a polysaccharide.

6. A ligand of a structure represented by following general formula (3), where m^1, m^2, n^1, n^2, p^1, p^2, p^3, and p^4 are independently an integer of 1 to 6.

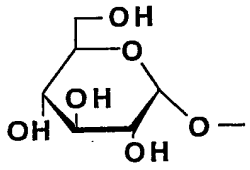
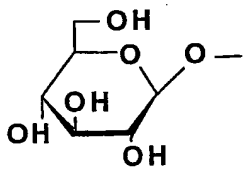


.... (3)

where Y has a structure represented by O or NH, and R^1, R^2, R^3, and R^4 independently has a structure represented by

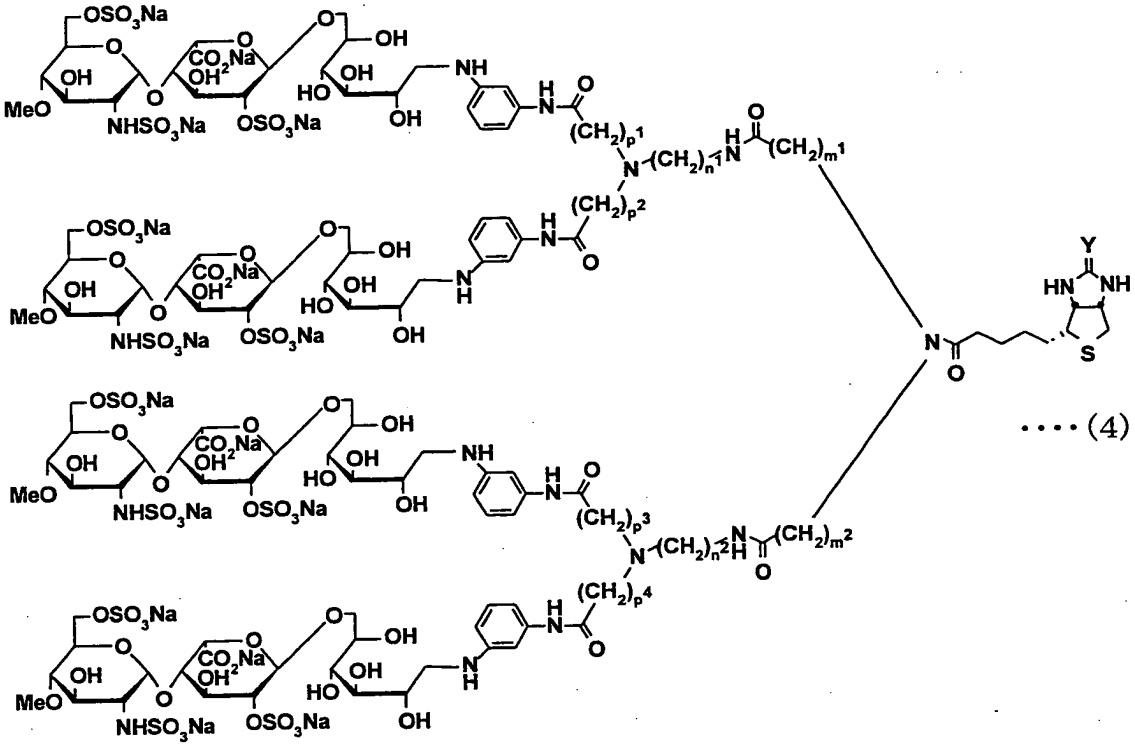
H– or  ,

and R^6, R^7, R^8, R^9, and R^{10} have a structure selected from the group consisting of

HO–,  , or  .

7. A ligand of a structure represented by following general formula (4), where Y has a structure represented by O or NH,

and m^1, m^2, n^1, n^2, p^1, p^2, p^3, and p^4 are independently an integer of 1 to 6.



....(4)

8. A producing method of a versatile linker compound, comprising the steps of:

carrying out a condensation reaction between a biotin-containing compound and an amine compound including four branched chains each having an aromatic amino group end protected by a protecting group; and

deprotecting the protecting group at the aromatic amino group end.

9. A producing method of a ligand, comprising the step of carrying out a reductive amination reaction by using the linker compound of any one of Claims 1 to 3 and a sugar molecule.

10. A sugar molecule introducing method which comprises

the step of causing a solution containing the ligand of any one of Claims 4 to 7 to come into contact with a supporter including streptoavidin or avidin immobilized on a surface thereof.

11. A ligand carrier which comprises the ligand of any one of Claims 4 to 7 immobilized on a surface of a supporter through a biotin-avidin bond formed between a biotin moiety or iminobiotin moiety and streptoavidin or avidin.

12. The ligand carrier according to Claim 11, wherein the supporter includes streptoavidin or avidin immobilized thereon.

13. The ligand carrier according to Claim 11 or 12 used as a sensor chip for a surface plasmon resonance measurement.

14. The ligand carrier according to Claim 11 or 12 used as a column for affinity chromatography.

15. A method for a measurement of surface plasmon resonance for detecting an interaction of a sugar molecule by using a sensor chip which includes a supporter and a sugar molecule immobilized on a surface thereof,

the method using at least two sensor chips including sugar molecules which have different end structures,

said at least two sensor chips including: a first sensor chip, which has a first sugar molecule, immobilized on a surface of a supporter; and a second sensor chip, which has a second sugar molecule whose end structure is different from that of said first sugar molecule, immobilized on a surface of a supporter,

wherein the method comprises the step of measuring a difference between a detection result yielded by using the first

sensor chip and a detection result yielded by using the second sensor chip.

16. The method for a measurement of surface plasmon resonance according to Claim 15, wherein a linker compound of a structure of Claim 1 or 3 is used to immobilize the sugar molecules on the sensor chips.

17. The method for a measurement of surface plasmon resonance according to Claim 15 or 16, wherein substantially a same number of sugar molecules are immobilized on the sensor chips.